



# Facts About Anthrax

Anthrax is an animal disease and is transmitted by spores.

Anthrax could potentially be used as a biological weapon by terrorists.

## WHAT IS ANTHRAX?

Anthrax is an acute infectious disease caused by the spore-forming bacterium *Bacillus anthracis*. Anthrax most commonly occurs in animals (cattle, sheep, goats, camels, antelopes, and other herbivores), but it can also occur in humans when they are exposed to infected animals or tissue from infected animals.

## WHY IS ANTHRAX IMPORTANT?

Anthrax has great historical significance. Plagues described in history books that caused death in both humans and animals are thought to have been due to anthrax.

In the minds of most military and counter-terrorism planners, Anthrax is considered the single greatest biological warfare threat. Because the spores are long lasting, the incubation is short, and disability is severe, experimentation with anthrax as a biological weapon has been common.

## HOW IS ANTHRAX TRANSMITTED?

Anthrax infection can occur in three forms: cutaneous (skin), inhalation, and gastrointestinal. Anthrax spores can live in the soil for many years, and humans become infected by handling products from infected animals or by inhaling anthrax spores. Anthrax spores lend themselves well to aerosolization. They are 2-6 microns in size, which is an ideal size for getting lodged in the lower respiratory tract of humans and causing infection. Eating undercooked meat can also spread anthrax. Infections of Anthrax in animals are rare in developed countries.

Anthrax spores cannot penetrate intact skin. Most anthrax infections occur when the bacterium enters a cut or abrasion on the skin, such as when handling contaminated wool, hides, leather or hair products of infected animals.

Direct person-to-person spread of anthrax is extremely unlikely, if it occurs at all. Therefore, there is no need to immunize or treat household contacts, friends, or coworkers of ill people unless they also were also exposed to the same source of infection.

## WHAT ARE THE SYMPTOMS OF ANTHRAX?

Symptoms of Anthrax are dependent on the route of exposure. The incubation period

normally ranges from 1 to 7 days, but inhalation anthrax can occur up to 60 days after exposure.

**Cutaneous:** Skin infection begins as a raised itchy bump that resembles an insect bite. Within 1-2 days a vesicle develops and becomes a painless ulcer with a characteristic black necrotic (dying) area in the center. Lymph glands around the ulcer may swell and the bacteria can get into the blood stream. Most anthrax skin infections respond well to antibiotics.

**Inhalation:** Initial symptoms may resemble a common cold: fever, muscle and headaches, fatigue, cough and mild chest pain. These symptoms persist for 2-3 days and the patient may show signs of improvement. This can be followed by sudden onset of severe respiratory distress, chest pain and edema of the neck and chest. Inhalation anthrax is usually fatal if untreated.

**Intestinal:** The intestinal disease form of anthrax may follow the eating of contaminated meat and is characterized by an acute inflammation of the intestinal tract. Initial signs of nausea, loss of appetite, vomiting, and fever. In later stages abdominal pain, vomiting of blood, and severe diarrhea are common. Intestinal anthrax results in death in 25% to 60% of cases.

## WHAT CAN I DO IF I SUSPECT EXPOSURE TO ANTHRAX?

Do not panic. There are multiple clues, which would alert authorities to a biological attack. If this occurs there will be security intervention and you as well as others with similar exposure may be quarantined until a full medical evaluation can be performed.

If you believe that you as an individual have been exposed, call your health care provider and provide as much detail on the exposure as possible. If you develop any of the symptoms mentioned above after a possible exposure, call your health care provider immediately.

## REFERENCES:

1. Anthrax fact sheet, Centers for Disease Control, [www.bt.cdc.gov/agent/anthrax](http://www.bt.cdc.gov/agent/anthrax)
2. Anthrax facts, Medline Plus, National Library of Medicine, National Institutes of Health [www.medlineplus.nlm.nih.gov](http://www.medlineplus.nlm.nih.gov)
3. Fact about Anthrax, Animal Plant Health Inspection Service, US Department of Agriculture [www.aphis.usda.gov](http://www.aphis.usda.gov)

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